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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,716	04/04/2001	Thomas Schutz	Q63690	1759
7590 12/19/2005				
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			EXAMINER NGUYEN, THUAN T	
			ART UNIT 2685	PAPER NUMBER

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/824,716	Applicant(s) SCHUTZ ET AL.	
	Examiner THUAN T. NGUYEN	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Appeal Brief Arguments

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. This decision is based on the outcome of an appeal conference from the examiner with SPE Edward Urban and SPE Nay Maung on Wednesday, November 30, 2005.
2. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Proakis et al. (U.S. Patent No. 5,844,951).

Regarding claims 1 and 6, Proakis discloses a receiver (Fig. 2) and its “method of combining at least two received signals of a telecommunication system; wherein a first combining algorithm is processed for providing a resulting signal, and a second, differing combining algorithm for providing a second resulting signal, and the two resulting signals are combined, wherein the combination is depending on the two resulting signals”, i.e., Proakis discloses an exact same method in a receiver for jointly performing

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diversity combining, see col. 2/lines 3-23, and the diversity combining uses more than one algorithm for combining, which different algorithms of course, based on the receiving signals and the resulting signals from both algorithms, refer to col. 3/lines 15 to col. 4/line 6, and particularly, in col. 15/lines 51-63 for two independent algorithms can be chosen for the combiner, and further on in col. 16/lines 10-28 as for other types of RLS algorithms can be applied within the scope of the Proakis' invention.

As for claim 2, Proakis further discloses wherein a quality of the two resulting signals is estimated, i.e., sensors are used for sensing the condition or quality of received signals and the receiver further includes means for the estimation of resulting signals (see col. 3/lines 23-47).

As for claim 3, Proakis further discloses "wherein the estimated quality of the two resulting signals is used to weight the combination of the two resulting signals" (refer to col. 3/line 48 to col. 4/line 6 for the jointly optimizer combiner-equalizer uses predetermined algorithm(s), as noted in claim 1 earlier for different algorithms not one, to weight and/or calculate the estimated quality of the two resulting signals).

As for claim 4, Proakis further discloses "wherein one of the two algorithm is a temporal reference algorithm and the other one of the two algorithm is a spatial reference algorithm" (Fig. 2 and col. 12/line 56 to col. 13/line 14 for spatial signal processing algorithm and temporal signal processing algorithm is jointly combined at the combining means 38).

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As for claim 5, Proakis further discloses “wherein more than two algorithms is used”, i.e., a plurality of alternative algorithms can be used (col. 16/lines 10-28 as for other types of RLS algorithms can be applied).

As for claims 7-9, Proakis further teaches these features comprising steps of receiving the plurality of signals, determining the condition of the signals, and selecting from a plurality of differing algorithms, one or more algorithm to process the plurality of signals, based on the condition of the signals, and combining the signals (refer again to claims 1 and 2 as Proakis discloses an exact same method in a receiver for jointly performing diversity combining, see col. 2/lines 3-23, and the diversity combining uses more than one algorithm for combining, which different algorithms of course, based on the receiving signals and the resulting signals from both algorithms, refer to col. 3/lines 15 to col. 4/line 6, and particularly, in col. 15/lines 51-63 for two independent algorithms can be chosen for the combiner, and further on in col. 16/lines 10-28 as for other types of RLS algorithms can be applied within the scope of the Proakis’ invention; and sensors are used for sensing the condition or quality of received signals and the receiver further includes means for the estimation of resulting signals (see col. 3/lines 23-47).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Zhang et al. (US Patent 6,795,506 B1) disclose a system related to perform combining algorithms.

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6. **Any response to this action should be mailed to:**
Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to the New Central Fax number:

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.



TONY T. NGUYEN
PATENT EXAMINER

Tony T. Nguyen
Art Unit 2685
December 07, 2005